PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Suzanne A. W. Fuqua et al.

Serial No.: 09/877,794

Filed: June 8, 2001

For: METHODS AND COMPOSITIONS FOR DETECTION, DIAGNOSIS AND PREDICTION OF ANTIESTROGEN-RESISTANT BREAST CANCER

Group Art Unit: 1642

Examiner: Ungar, Susan NMN

Atty. Dkt. No.: UTSK:348US

#
11
KO
4-16-03

CERTIFICATE OF MAILING
37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on the date below:

February 19, 2003
Date

Thomas M. Boyce

RESPONSE TO
THE RESTRICTION REQUIREMENT
DATED SEPTEMBER 19, 2002

Commissioner for Patents
Washington, D.C. 20231

Sir:

This is in response to the restriction requirement mailed on September 19, 2002, to which a response is due on February 19, 2003, by virtue of the accompanying Petition for Extension of Time, and payment of fees. No other fees are believed to be due in connection with the filing of this response; however, should applicants' check be missing, or any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Assistant

Commissioner is hereby authorized to deduct said fees from Fulbright & Jaworski Deposit Account No. 50-1212/UTSK:348US.

I. RESPONSE

As described in the Office Action dated September 19, 2002 ("the Action") the Examiner has imposed a restriction requirement among allegedly numerous inventions defined by the present claims. In responding to the restriction requirement, Applicants respectfully submit that the definitions provided of the allegedly distinct inventions are at best somewhat confusing and, at the extreme, inaccurately characterize Applicants' invention. Applicants therefore respectfully traverse the restriction requirement and, under 37 C.F.R. §1.143, provisionally elect claim 1 directed to a method of detecting tamoxifen-resistant breast cancer cells, provisionally electing the species of an *in vitro* method utilizing an antibody that specifically binds to tyrosine protein kinase receptor (TIE-2).

Applicants expressly do not disclaim the subject matter of any of the remaining claims.

II. TRAVERSAL

A. The Claim Groups are Duplicative and Indistinct

The Examiner identifies twenty-six separate claim groups, each directed to one species. Yet several of the descriptions of the allegedly independent and distinct inventions are identical. For example, Group V consists solely of claim 3 (allegedly directed to an *in vitro* method), as does Group VII. No limitations or characteristics are identified that may distinguish Group V from VII. The texts describing Group V and Group VII are, in fact, identical, including the classification of the invention. Similarly, the text describing Group VI is identical to that of

Group VIII and Group XIII is identical to the alleged Group XIV. Applicants are at a loss to understand how restriction among these groups is to be maintained and therefore respectfully traverse.

B. There is No Claim Limitation Reciting *in vivo* versus *in vitro* methods.

The Examiner appears to identify at least two species within each of claims 1-4 and 11 based upon whether the claimed method is practiced *in vivo* or *in vitro*. Applicants respectfully note that no claim element recited in these claims or those that depend therefrom expressly recites *in vivo* versus *in vitro* methods. Respectfully, Applicants are at a loss to understand how this limitation has been read into each of these claims. Applicants therefore respectfully traverse any restriction requirement based upon the alleged distinction between *in vivo* and *in vitro* species. Applicants are not arguing that the alleged species would be obvious in view of each other, but rather are arguing that there is no basis for the *de novo* introduction of these limitations into the claims. But additionally, Applicants respectfully argue that if the alleged distinction between *in vivo* and *in vitro* methods is somehow maintained, the effected claims are therefore generic to those alleged species.

C. Restriction of the Generic and Proper Markush Claims is Improper.

The Examiner imposes a restriction to a single antibody or particular combination of antibodies or a particular combination of polypeptides to be used in practicing the invention within each of claims 1, 2, 7, 16, 17, and 19-21. In contrast, restriction is not imposed upon the species embraced by claim 12, but rather the proper requirement of election of a species for initial examination is imposed. See the Action at page 11, lines 17-21.

Applicants respectfully note that claims 1, 2, 7, 16, 17, and 19-21 comprise generic, linking claims and are in proper Markush format, as is claim 12. Applicants respectfully submit

that ***restriction*** of these generic, linking claims is improper under applicable law and that restriction of proper Markush claims is likewise improper.

With respect to the imposition of a restriction requirement as to species embraced by the generic and linking claims, Applicants respectfully draw attention to the recent decision by the Federal Circuit Court of Appeals, which notes that an applicant can prosecute these generic, linking claims in the original application "without running afoul of the restriction requirement ***because they are linking claims***." *In re Michael P. Doyle*, 01-1439, *10 (Fed. Cir., June 12, 2002) (Fed. Cir. BBS) citing MPEP §809.03 (8th ed. 2001), emphasis added. Indeed, in the Doyle case, the Solicitor for the PTO agreed before the Court that the applicant ***should*** have prosecuted these claims. The Court held that the absence of such claims from the parent application was an error in the patent correctable under the reissue statute. *Id.* at *11.

Further, in reaching the decision in the case, the Court noted that allowance of a linking claim prompts the examination of covered species. *Id.* at *13. The Court states that "The MPEP expressly provides that '[I]f a linking claim is allowed, the examiner must thereafter examine species if the linking claim is generic thereto, or he or she must examine the claims to the non-elected inventions that are linked to the elected invention by such allowed linking claim.'" *Id.*, citing MPEP § 809.04, emphasis added by the Court. Yet, in the present case, the restriction requirement imposed upon the generic claims in the present application attempts to foreclose Applicant's ability to have their claims properly examined in their full scope. Such an attempt is in direct contradiction to the reliance of the Court on the procedures available to the Applicants as provided in the MPEP. Applicants respectfully submit that the requirement is therefore in error.

At the most, under MPEP § 809.02(a) Applicants may be required to elect a species for examination under a generic claim, not amend the claim to remove its generic scope. Applicants respectfully submit that the additional restriction requirements as stated are improper on the facts and under applicable law. Additionally, the Examiner is required to identify such generic claims, pursuant to MPEP 809.02(a) and 804.06(d). Applicants respectfully note that the generic claims of the present invention have not been identified by the Examiner, but for claim 12.

Similarly, MPEP § 803.02 provides that "A Markush-type claim can include independent and distinct inventions. This is true where two or more of the members are so unrelated and diverse that a prior art reference anticipating the claim with respect to one of the members would not render the claim obvious under 35 U.S.C. 103 with respect to the other member(s). In applications containing claims of that nature, the examiner ***may require a provisional election of a single species prior to examination on the merits***." Emphasis added. The Examiner has shown no lack of unity of invention for that which the Applicants regard as their invention. Therefore, there is no showing that any of the relevant claims are improper Markush claims. All the compounds listed in the groups share the common utilities within the methods. Therefore, Applicants respectfully point out that requiring restriction to a single species of the group, and the inferred amendment to the claims to exclude the remaining members of the group, is not proper. Applicants respectfully submit that, at the most, Applicants may be required to provisionally elect a single species, as suggested for claim 12.

Applicants have provisionally elected the invention of Group I. However, Applicants respectfully contend that they are entitled to have the generic and Markush claims properly examined in this and any continuation application containing such claims.

D. The Asserted Number of Inventions is Incorrect.

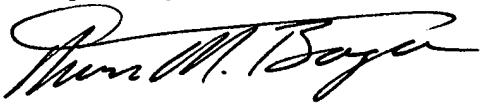
The Examiner incorrectly asserts that the potential number of combinations of two or more polypeptides (or antibodies) selected from the listed group of seven polypeptides (or antibodies) is "by Factorial Analysis ... drawn to 5040 separate and distinct inventions." See the Action at page 3, lines 5-7. Applicants admit that the number 5040 equals 7!. This, however, is not the number of different combinations of two or more different objects selected from a group of 7, but rather represents the number of permutations of seven objects taken from that same number of different objects, *i.e.* the number of ways of rearranging the order of 7 different objects, with duplication.

Applicants respectfully note that the proper analysis is combinatorial. A population S consisting of n different objects contains $C_{n,k}$ subsets of size k, where each $C_{n,k} = n!/\{k!\ (n-k)!\}$. Here, n = 7, the subsets k range in size from 2 to 7. The sum of the number of subsets for each k provides the total number of combinations possible, which in the present case equals 85, not 5040.

This factual error, repeatedly asserted with respect to claims 2, 7, 16, 17, and 19-21 is at best hyperbole and at worst a mischaracterization of Applicants' invention as encompassing a vast number of species. To whatever extent this factual error informs the restriction requirement, Applicants respectfully traverse.

The examiner is invited to contact the undersigned with any questions regarding this response.

Respectfully submitted,



Thomas M. Boyce
Reg. No. 43,508
Attorney for Applicants

FULBRIGHT & JAWORSKI
600 Congress Ave., Suite 2400
Austin, TX 78701
(512) 536-3043
(512) 536-4598 (facsimile)

Date: February 19, 2003